

QL

WORLD

THE INDEPENDENT MAGAZINE FOR THE QL OWNER



LEISURE SOFTWARE
NEW COMMUNICATIONS
COLUMN
REPAIRS GUIDE
WIN A TANDATA SYSTEM
PERIPHERAL REVIEWS

Q L MONITOR



Microvitec, the product leader in colour displays, have produced a monitor specifically tailored to the requirements of the QL micro, offering not only outstanding graphic capabilities but also excellent 85 column text performance.

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- RGB/TTL input
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- Dot pitch: 0.43mm
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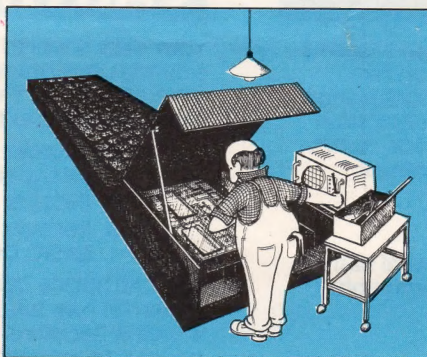
A reader describes how he dealt with his search for a printer and offers some timely advice regarding the method to be employed to obtain the best service. The Medic disc drives and interfaces are examined. Page 7

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The first fully-compiled Pascal system is now available. We put the Metacomco offering under the microscope. Page 20

COMMUNICATIONS

Tony Dennis, an old hand at communications, says there is no need to feel disillusioned about modems. He lists the many bulletin boards which are now available to QL users. Page 24

INSIDE QUANTA

Leon Heller says Quanta is becoming increasingly concerned about software piracy and issues a stern warning about the consequences. Page 29

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Readers express their views and continue to seek assistance regarding the difficulties they experience. Page 32



October 1985

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Volume 1 Issue 3

QL WORLD is an independent magazine published by QL World Limited, Wells House, 80-82 Upper Street, London N1 0NU. Tel: 01-359 3525.

All Editorial, Advertising, Production and Subscription enquiries to above address. Subscription rates: U.K. £14; Europe £25. Printed by Cradley Print, Cradley Heath, Warley, West Midlands.

ISSN No 0268-067X

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Qcode is Prestel-compatible

QCODE has developed software to turn the QL into a communications terminal. Used in conjunction with the Modaptor, the Qcode terminal emulator is compatible with most modems on the market. The Modaptor is manufactured by Miracle Systems so the company's popular WS2000 modem can now be used with the QL.

The main asset of the program is its Prestel compatibility. It permits the QL to access one of the biggest U.K. databases, which includes Micronet 800. The terminal emulator allows the user to input a Presel customer identity number for speedier log-on. The software will store the number automatically so that it does not have to be re-entered each time the program is booted-up. The Prestel facilities include 'reveal', which displays information hidden on special

pages. As there is no official Micronet software downloader, Qcode does not support it.

Software transfer can be carried-out using the other main feature — the VT52 terminal emulator. Although it takes its name from one popular Digital Equipment terminal, the feature will probably be used by most buyers to access bulletin boards at 300 baud. Options in VT52 mode cover a choice of baud rates — 1,200/75 is included — and the ability to program functions on to keys.

The program has a large number of help files. Terminal emulator also has its own screen editor which can be used to edit or prepare text. File transfer does not include any error-checking protocol like Xmodem but otherwise should prove useful.

Although most users will need the Modaptor, it is possible to

use the software directly via serial port two. A standard QL serial cable can be used. It was tested on an intelligent modem. Commands were sent to the modem at 1,200 baud full duplex and a link to a 300 baud service achieved — the modem takes care of the incompatibility. Sadly, one cannot use this method

for the Prestel facility. For QL owners who already possess a modem, the software is essential.

Terminal emulator costs £15 and Modaptor £39.95 from Qcode, 42 Swinburne Road, Abingdon, Oxon OX14 2HD. Tel: 0235 28359. Both are also available from Miracle Technology, 0473 50304.

New games crop

THE PERSONAL Computer World Show at London's Olympia was the venue for the release of a crop of new games software for the QL, as well as the first public showing of the soon-to-be-badged QL printer.

The new games are *QL Meteor*

Storm, an asteroids-style arcade game which features 3-D graphics, high-score tables and a two-player option, and *QL Reversi*, a computerised version of the famous Othello game.

Both of those are reviewed in this issue.



Computer One continued its support for the QL at the PCW show and showed its full line of products for the machine, which now include several programming aids and a typing tutor — pictured.

Disc drives are most popular items

DISC DRIVES and storage devices must be the most popular items for discussion by QL users at the moment.

The author of the F-Copy Microdrive fast-copy utility, Rob Sheratt, which we featured in the last issue, has had so much interest in it that he wanted to incorporate some improvements into the second part. We have given him the time to do that, so you will see the result in a succeeding issue.

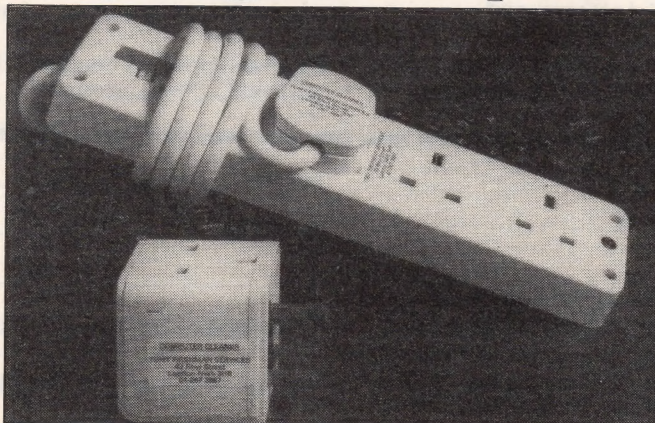
We have also been flooded with entries for our first disc drive competition in which we asked for your file-handling ideas, and have not yet had sufficient time to examine all of them properly. We were receiving entries up until the last day of our deadline, including a few from Europe which were postmarked in August but did not arrive until September.

To give all entrants a fair chance, we have delayed announcing the winner of the Sili-

con Express disc system until the next issue.

Entries for our second disc drive competition, to win a Micro-Peripherals Sinclair-badged disc system, are already arriving and we are expecting you to be interested in the communications competition set for you this month.

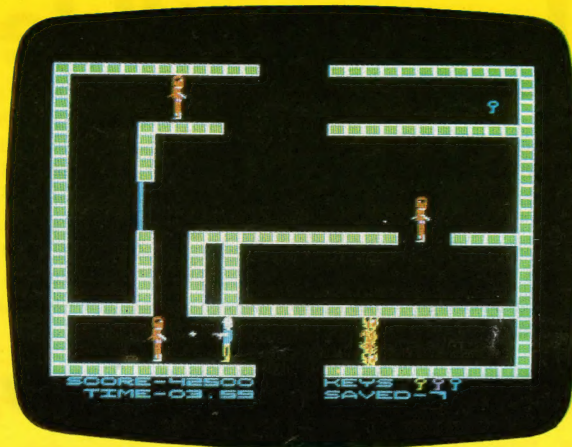
Coping with power surges



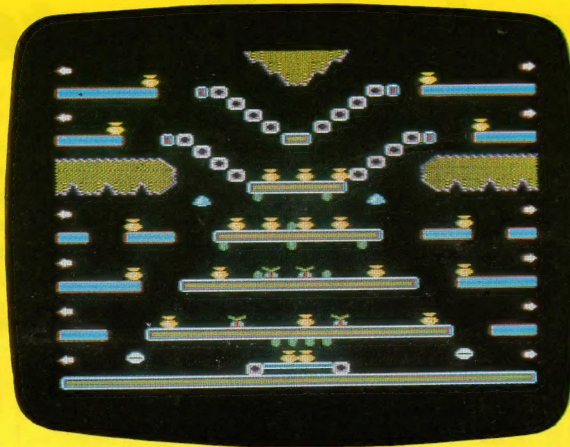
YOUR refrigerator will no longer be allowed to pillage power from your QL. Tony Firshman Services is marketing a £14.95 power supply cleaner — pictured — which ensures that surges of power on your electricity line, such as those produced by a fridge when its thermostat turns it on, will not crash the QL. Firshman says he designed the adaptor after having the QL blow up every time his washing machine moved into top spin, thus causing him to lose various accounting records.

FREE!

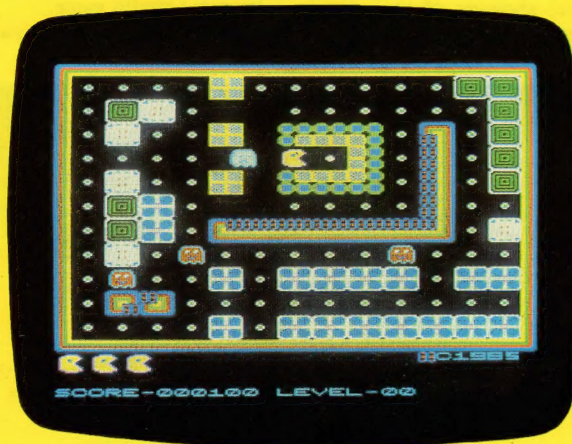
Four free games for every QL owner!



M - COSMIC. Your job is to save your friends, deep-frozen in an enemy space-ship. A mission of cool nerve and firm courage.



M - TREASURE. Deep underground there are bags of gold for you to collect - and man-eating spiders to stop and slay you.



M - CRUNCHER. Stay clear of the jaws that chase you through the maze, avoiding hazards and building points as you go.



M - METROPOLIS. Fast-moving excitement as you steer through screen after screen of incredible dangers and rich rewards.

MEDIC now offer every Sinclair QL owner four brilliant new games - absolutely free! Just send three formatted blank microdrive cartridges for these four best-ever games for the QL, testing your skill, speed and concentration with colourful screens and inventive displays.

All games 100% machine code, with flicker-free multi-colour multi-screen graphics. Three full cartridges of

fast-moving instantly-responsive action.

WHY? Medic offer you this fantastic games value FREE, because they want you to see the quality of Medic software, and as their way of showing their commitment to this superb machine.

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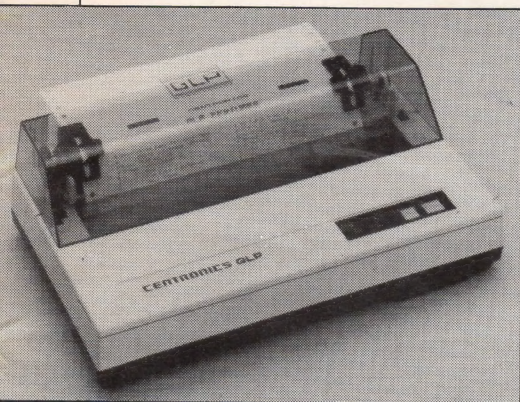
Name _____

Address _____

Telephone Code _____ Number _____

Please complete all details and write clearly.

Centronics GLP is good choice



HAVING in February become the owner of my first printer, I thought I must boast a little. My claim to fame is a Centronics GLP dot matrix, near letter-quality, bought for £235 with RS232 cable and VAT included.

It all happened at Compec in November, 1984. Centronics has never produced an interface, parallel or otherwise. What you have is a Centronics standard interface—that means it sets the standard but does not make it. Perhaps, like me, you know someone who has one of the 20-years-out-of-date models—I know three of those—and they all still perform wonders even in their advanced state of senility.

Having seen the Brother M1009 look-alike, I found that it was so new that it was not even on sale and what I was seeing was one of the prototypes. Having been quoted less than £250 as the forecast retail price, I wandered to compare the competition and could find nothing with nearly similar print quality for less than £300, so after consideration I telephoned the Centronics sales department and was given three addresses in and around the London area. The best quotation I had was from Gultronics in London's Tottenham Court Road.

Impressed

Being in a hurry, I bought without seeing it working with a QL or, against the shop's advice, letting its salesman set it up for me. After a near sleepless night of a great deal of error and not much trial, I had not made it do anything other than work in the test mode. Early next morning I returned to Gultronics and found someone who did not talk down to me or speak in a language sounding like an audition for Tomorrow's World.

After about four hours of wasted effort by the salesman, his manager and almost every well-meaning passer-by, we figured what should be the dip switch settings—even though he could not get the display model to

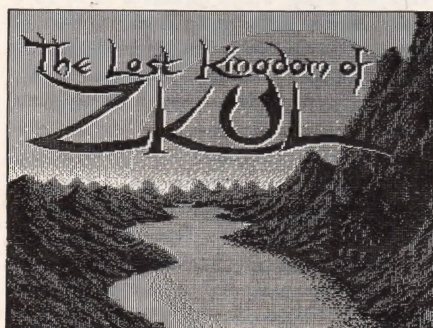
work with a QL—so I tried again. In the Centronics technical department it was 4.30pm on Friday. After threatening to return the offending article and spend my money on someone else's shining product, it was decided that I should return it to the technical department in South Kensington immediately.

By the time I arrived it was 4.55pm and, after replacing the main board, fitting a different EPROM—the one fitted as standard was set at even parity and the QL requires non-parity—re-setting the dip switches and testing it thoroughly, I was sent away not only impressed with a service I had been led not to expect from manufacturers in the computer trade, but also with a working printer which does everything but knitting.

The range includes full QL-compatible character range, including full foreign character set as on the QL, graphics, block graphics, near letter-quality, condensed, sub- and superscript, enlarged, double-strike and easily-set line spacing and, with a little re-setting of the dip switches, a reasonable rendition of Easel—without additional software. Also as an option is an Epson RX80 EPROM which will be offered as an alternative piece of firmware—that means all the aforementioned plus italics—from registered dealers which will take all the Epson commands.

The aforementioned non-parity EPROM is now available to the retail dealers to be fitted as standard when bought to work with a QL. A big advantage also is the fact that the ribbon and the paper feeder are the same as on the Brother M1009, so there is no difficulty with the availability of either, because Centronics and Brother are, dare I say it, very closely-related parts of the same company. The GLP will also accept an Epson screen dump if you alter the line-spacing.

The moral of the story is that if you want a NLQ printer for less than £300 but want the after-sales service of a company which normally markets products in excess of £2,000, it is a good choice. — David Storton



MANY EARLY QL owners were very patient. They had to be, with Sinclair taking up to three months to satisfy orders for the machine. Now there is a cadre of QL owners even more patient than those who braved the early waiting for the machine. They are the people who ordered disc interfaces and drives from Medic. Medic has been dogged by manufacturing problems and delivery delays since its entry into the QL market but now finally seems to be shipping disc interfaces and other add-ons in volume.

The big question is whether or not the hardware has been worth the wait. On first inspection, the answer seems to be that it has. Although long-time Medic-watchers may be used to seeing the L-shaped PCB which has so long featured in the company's distinctive magazine advertisements I can report that it now has a well-designed and snugly-fitting black plastic case for the board, which provides an extension looking very much like the right-hand portion of the QL which contains the Microdrives.

Printer and disc drive cables are hidden at the back of the interface but, like most other disc interface manufacturers, Medic has made no attempt to replicate the expansion port, thus ensuring that you have to buy some form of expansion box to fit more than one interface in the machine at once. It should be said, however, that since the Medic board caters for RAM expansion, parallel printer port and disc interfacing, there is little need for such an expansion box.

Immediate address

Once you have hooked-up the system you turn on everything and see the Medic name above that of Sinclair on the now-famous 'Press F1/F2' switch-on screen. The presence of the Medic interface seems to slow re-setting, and even start-up, a little, but no more than on some other similar disc interfaces.

When you have turned on the machine and entered SuperBasic, the disc system can be addressed immediately with the FLP-command, first popularised for disc use with the CST system where disc drive 1 is FLP1_, and so on.

Those disc access commands, however, can be modified with the statement FLP_USE MDV — which allows you to access the floppies with the standard Microdrive commands MDV1_ and MDV2_. Again that is a standard feature of most other disc systems and is important in guar-

continued on next page

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anteing the flexibility of running QL packages off-the-shelf as Microdrives or modified for use with FLP_.

Besides adding FLP_ as a device name, Medic has added two other new devices in its list of what you can address through its disc system. There is a device called PAR, which sends output to the parallel printer port, and another called RAM, which allows you to use part of the Medic RAM expansion as a RAM-disc.

The addition of those device drivers makes the system easier to use and fits in well with the device-independent nature of the QL Qdos operating system. The existence of a parallel printer system which does not bung up the serial ports of your machine with cables and converters is a welcome change and the presence of a RAM-disc speeds access times considerably.

Most of the facilities offered by Medic are also provided by competitors, so it is pricing and extras which the company hopes will attract buyers. The Medic offering is definitely inexpensive — £249 for single 1MB unformatted drive, interface, parallel port, power supply and cables — and there is some bundled software — a Macintosh-like desktop information transfer system, spelling checker for QL Quill and mail-merge, among others — although none of that software was sent with the review system.

None of that, however, takes into account the delivery problems mentioned earlier, which I am afraid bear repeating. It seems

that Medic has produced a well-designed, thoroughly-competent range of hardware but has fallen to temptation of prematurity.

We have had a number of letters and telephone calls from readers bemoaning the fact that they have not received their Medic systems within the promised 28 days.

One example is the letter from G E Audas of Goole, North Humberside, who wrote: "I ordered a copy of M-Paint from Medic Datasystems. The cheque was cashed on July 2. I then wrote stating I had not received the cassette ordered. To date no reply has been received. I know that magazines such as yours cannot be held responsible for such actions but I feel that all magazines worth their salt should owe it to their readers to see that they can be relied on to see that justice can be done, pressure can be applied by them on people who place advertisements with them."

We are aware that many of the Medic delivery problems have to do with the failure of companies to deliver to it on time but that is not the customer's problem. The company designed a well-working and credible piece of hardware which enhances the power of the QL significantly. Now it has promised it will clear all existing orders before accepting money for new orders. All orders will now be on a cash-on-delivery basis.

With that kind of protection, the Medic system is a product we can recommend but if the company is again in the position of not delivering on time, we would have to withdraw that. — *Geof Wheelwright*

IT IS more than 18 months since the QL was launched with promises of hard discs, RAM expansions and high-level language implementations. While Sinclair and other third-party houses have done much to satisfy demand for the two latter items, provision of a hard disc system for the QL was shuffled to the back burner. Now the wait is over, as we reveal in an exclusive first look at the new CST hard disc system.

The £13.80 excluding VAT package includes a 10MB Winchester disc, an interface and a number of programs to control disc files. Among the bundled programs are a disc doctor and an altered file back-up facility.

The hard disc system is fast and big. It will store more than 100 times what you can fit on a typical Microdrive and retrieve your files with far greater speed. For those with technical knowledge, that means the CST drive is spun at 3,600rpm and its four platters are formatted with more than 300 cylinders per platter.

As the drive spins continuously, it must

be treated with great care. The read/write head is held close to the disc surface and any knocks which put the head in contact with the disc will cause serious damage.

The drive runs silently except for a faint clicking sound as the read/write head moves between tracks. The interface plugs into the QL expansion port and is in the same casing as the CST floppy disc control.

To look at, the system appears as nothing more than an uninspiring black box but hard discs have never been the height of aesthetics. The disc drive and its power supply are built into a case which measures 21 × 23 × 9cm. On the front there is a LED which shows when the drive has been selected. At the back there is an on/off switch, a IEC power-in socket and a lead to connect the drive to the QL interface.

It may not seem important but the length of the connecting leads to and from such devices can have a great deal to do with how flexibly it can be arranged on your desk. Fortunately, the CST system includes a two-metre mains lead and a 1.5 metre lead between the hard disc and the QL.

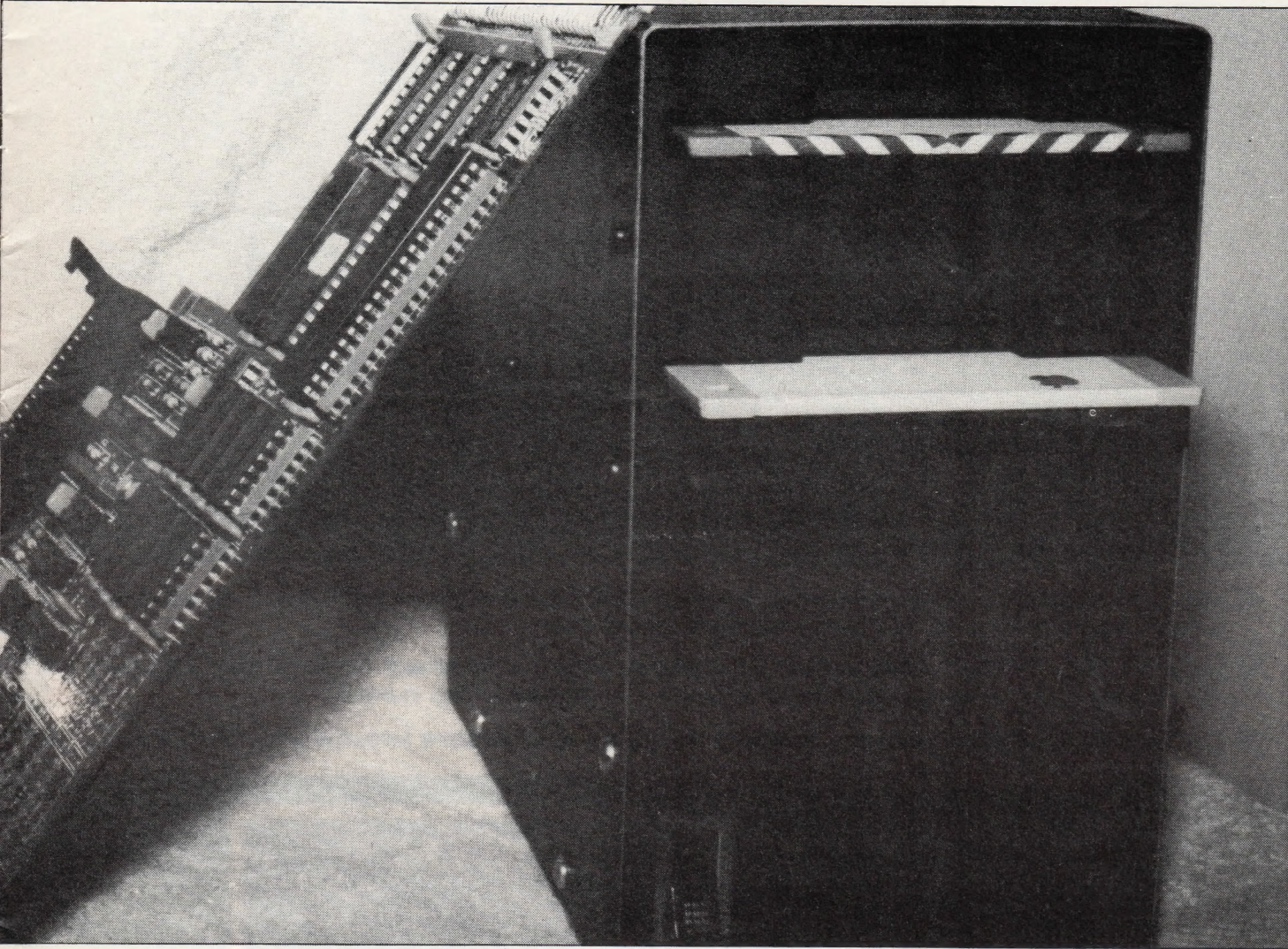
While it does not conform to the Winchester interface system standard, the board contains all the necessary hardware and software to control the supplied disc, as well as a number of Basic extensions from the now-famous Tony Tebby toolkit. They include commands for random file access and wild card directories. Such commands are useful, as the supplied device driver software does not support sub-directories and without the extra commands it would be difficult to control the directory of such a large device.

To use the hard disc you simply use 'WIN' instead of 'MDV' and all but one of the normal SuperBasic commands will work with the new device, as will all other programs which allow you to change their defaults. The only command which has changed is 'FORMAT', which is sensible enough, as you want to be sure you do not format the hard disc by accident and erase all your data.

If you are unable to make certain programs run with the disc, CST supplies the command "WIN_USE". That allows you to



PERIPHERAL REVIEW



change the name of the drive, to something else such as 'MDV', so making Qdos think that the hard disc is a Microdrive.

If even that does not work, a program is supplied which will change the defaults held in the program code. You can use the program on the four Psion programs to make them default to the hard disc for their help and work files.

The most important program included in the bundled software is the data management utility. It permits you to back-up files easily which have been changed since your last file back-up. It does so by storing the date it was last called and then checks each file on the disc to see if it has been changed

since then. If a file has been updated it will be copied across either to a floppy disc or Microdrive.

The other program is a disc doctor, which is supplied in case you forget to close a file on the disc or on the off-chance that a file may become corrupted. It will allow you to retrieve such files, as well as re-naming files and editing them.

The table in figure one shows the speed of the Winchester compared to that of other devices available for the QL. The timings for a RAM disc are given, as they show the maximum speed at which the QL can retrieve information from a device.

Due to the speed of the Winchester, most

programs spend more time setting-up their screen and tables than loading. Other programs such as Archive may also seem slower than they should as they spend more time setting-up their files than saving them.

The only possible problem you may encounter after buying the system is trying to expand the QL afterwards. To use the Winchester fully, extra RAM will be needed. That is because some programs such as Archive store their tables in RAM and thus an unexpanded QL will not be able to control the bigger files. To plug a RAM board into the QL with the hard disc, you will need to buy some type of expansion bus. CST offers such a system for £195.

If you have already invested heavily in a QL system and are now looking for a bigger and faster storage device, the CST Winchester disc system may be worth buying. If, on the other hand, you are considering a system which has a Winchester disc with a large amount of memory and are not yet committed to using the QL as the route for doing so, it may be wiser to buy a bigger computer.—
Roger Thomas.

Figure 1.

Storage system	Winchester	Floppy	Microdrive	RAM disc
Duplication of a 91K file to the same device	12s	58s	74s*	7s
Loading a 32K file	1.1s	2.2s	7s	.95s
Storage space	9.5MB	720K	100K	< 600K
*This is not possible and the timing is calculated by duplicating a 45K file and multiplying the time taken by two.				

COMPETITION

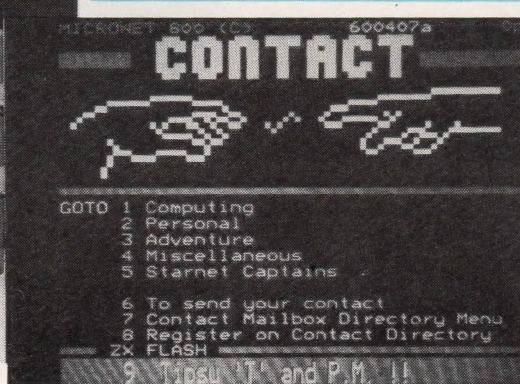
Communications, as we stated in our cover story in the previous issue, is becoming increasingly important for QL users. Communicating with on-line databases and bulletin boards is no longer the pastime of a hacker elite but is becoming commonplace use for powerful home/business computers like the QL.

To promote that use of the QL, we offer you a chance to win a complete Tandata communications system — with the Q-CON communications module, a 1,200/75 modem, Prestel software and an auto-dial/auto-answer module — and a one-year subscription to the Micronet information service on Prestel.

With that modem and subscription, you will have immediate access to the thousands of pages of information offered by both Prestel and Micronet, which has a good record of comprehensive QL news stories. The service will allow you to book theatre tickets, hotels, check the latest exchange rates, or even the hottest world and international news stories.

To win the package, answer the following three questions correctly and complete the attached form. A winner will be drawn from all the correct entries received. Here are the questions:

- Which famous communications expert said "Come here, Watson, I need you" when he first tested his early comms devices?
- One of the Prestel computers is named after a famous turn-of-the century British author who wrote 'East is East . . .' What is his name?
- In communications jargon, what is a Sysop and where would you find one?



ENTRY FORM

Name

Address

.....

.....

.....Post Code

Tel. No.

Entries should be received by *QL World* no later than November 1, 1985, *QL World* cannot take responsibility for lost entries. Please write to: Micro-P Competition, The Editor, *QL World*, Wells House, 80-82 Upper Street, London N1 0NU.

Using the form on this page, your entry should include your telephone number and, on a SEPARATE sheet of paper, the answers to the three questions, when you bought your QL, what peripherals you own for your machine, and what add-ons you hope to buy in the next 12 months. The winner's name will be published in a future issue of *QL World*.

SIMPLEX EXPANSION

The main object of Simplex Data Logic is to build up a QL peripheral mail order company, where good quality goods, keenly priced, are normally delivered ex-stock. Where goods are not in stock, we will deliver within 14 days.

Q+2.....£69.90 inc VAT (p&p 5.00)

Allows two peripherals to run together.

Fully cased for protection.

Supplied with its own power supply.

Easy fitting.

One year warranty.

256K Board.....£179.90

512K Board.....£269.90

256K upgrade to 512K.....£149.50

SPECIAL OFFERS

Q Disc + Q+2 + 256K Memory.....£299.00+VAT (p&p £5.00)

Q Disc + Q+2 + 512K Memory.....£399.00+VAT (p&p £5.00)

Q+2 + 256K Memory.....£199.00+VAT (p&p £5.00)

Q+2 + 512K Memory.....£299.00+VAT (p&p £5.00)

★ 256K can be upgraded to 512K—no need to purchase another board.

★ Upgrades completed within 48 hrs.

★ One year warranty backdates to a year if board is returned to upgrade.

★ All prices include free RAM disc.

★ Memory expansion speeds up entire QL system by 20–30%.

★ Cuts down Microdrive accesses when using Psion packages.

★ 512K loads HELP file from Microdrives (all held in RAM).



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QLW/10/85

REPAIRS

Fixing solutions made easy

YOUR QL has died on you. Perhaps someone dropped it on its nose, or you plugged too many pieces into the back and the whole thing ceased to function. When you have dried your eyes and thrown your seemingly dead machine into a box, where do you take it?

Short of melting it down and making odd-shaped metallic ornaments out of it, there is little you can do. You have only three choices. First, you could send it to Sinclair and take your chance on an all-in repair cost of £40. You could take it to a third-party maintenance company — see our list for guidance. Third, if you are wise, you will have insured it for repairs initially, so no matter what needs doing to it, someone else will foot the bill.

If you take the last option, various insurance companies will insure a micro for repairs but you would be well-advised to stay with the main two tried and trusted insurance schemes available.

They are Computer-Fix at Camberley, which also does Sinclair guarantee work, and the Micro Repair Club at Ascot. Both run schemes in conjunction with Wimbledon-based insurance company Domestic & General.

Based on value

Computer-Fix charges £30.60 for a year's insurance on the QL, all premiums being based on the value of the micro, and you can insure your peripherals, too. Rates vary but all prices include VAT and postage.

When your QL arrives, it will be subjected to a test by the Computer-Fix computerised test equipment and repaired accordingly, using spares direct from Sinclair.

The Micro Repair Club would be a cheaper method, at an all-in price of £24.95, with subsequent years costing £14.95 each. The club is the more difficult to reach, via an answering machine.

It was suggested that Domestic & General was not to continue underwriting the Micro Repair Club scheme but that was denied by Domestic & General underwriter Alan Barker, who confirmed that the scheme will continue.

One word of warning. You should not wait until your QL ceases to work before you insure it, as that is, strictly speaking, fraudulent. You may prefer to go direct to Sinclair for repairs, although that is likely to be the most expensive course and perhaps the slowest way of having your QL back in one piece. Sinclair promises a 10-working-day turnaround, although various users have reported that they waited several weeks.

It may be better to go to an independent maintenance company, as they tend to be faster than Sinclair, with turnaround varying from 24 hours to three days in most cases, with some offering a while-you-wait service, too.

Although warranty on most QLs will not begin to expire until at least this month, numerous repair companies have received enquiries from QL users whose machines were still in warranty but who preferred to pay for maintenance rather than risk waiting a long time for Sinclair to deal with it.

The work of the independent companies was made easier in June when Preston-based

Many QL users have difficulties regarding repair problems. Wendie Pearson sets out the list of options and choices which are available.

company CPC received a big delivery of parts and that was greeted with relief by the numerous companies which could not obtain QL spares and were therefore unable to help users.

At CPC, the only U.K. company authorised by Sinclair to sell QL spares in the U.K., a spokeswoman confirmed that there is a big demand for spares from independent repair companies. The fact that the QL uses more expensive chips than most micros means that repairs will be more expensive than prices charged, say, for the Spectrum. Repairs for the latter hover between £10 and £20 but QL repairs look like varying between £30 and £45.

Problems with the

One or two companies said that the Micro Peripherals QL disc system, comprising a disc interface module with two 3.5in. drives, has proved a popular answer.

Capital Computer Services in Cardiff has started repairing QLs and will give interested parties an estimate. "Since parts like 68008 processors cost £10, prices for repair could be as high as £40," says partner Mostin Hellard.

"Where the QL falls down is the way it is constructed. Where a similarly-priced micro like the BBC will have a reasonable repair price, that of the QL is more expensive because of the way it is made."

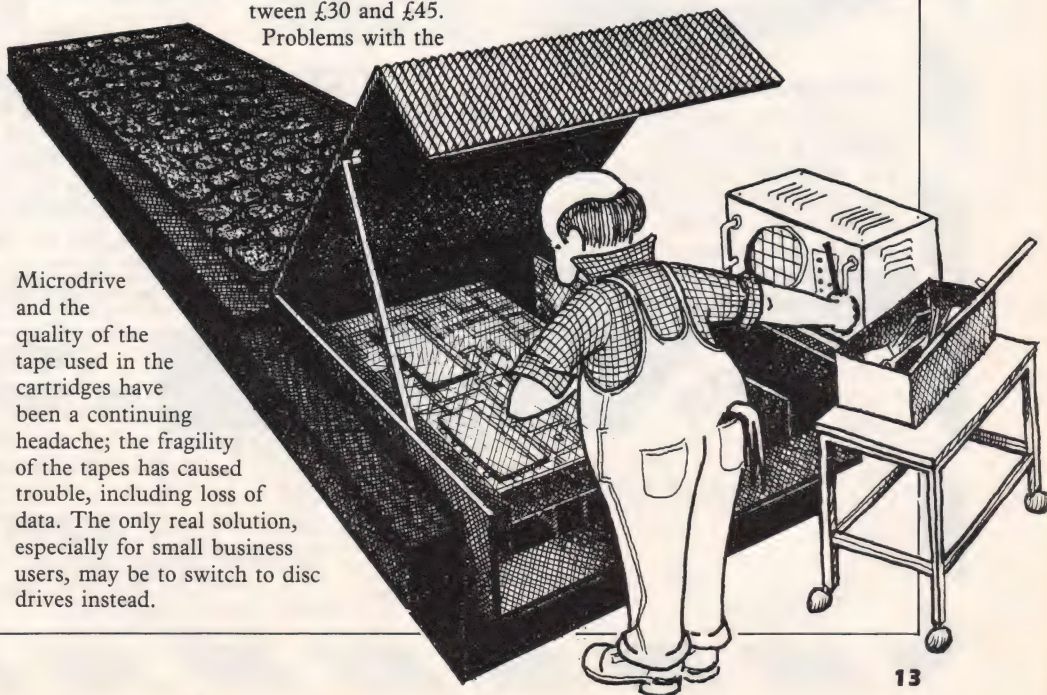
At Enfield Communications in Middlesex, managing director Andy Scott says he expects prices to vary between £20 and £30, a view echoed by manager Jim Lynch of MicroServ at Denny, Scotland, while John Serlin, managing director of Suredata in Middlesex, says the cost could be as much as £50. In comparison, Martin Crossman, technical director at Minnie Micro of Southend, expects prices to vary between £12 and £30.

One establishment which promises not to exceed Sinclair prices is Zedem Computers of Bedford. "We would charge an average of £45 for a natural defect but if someone connects an interface and the QL blows up because of this, we would charge more," says senior engineer Ziahid Massey.

The most common problem appears to be the Microdrive, which can be somewhat unreliable in the way it loads programs. Usually the head or the ROM need replacing.

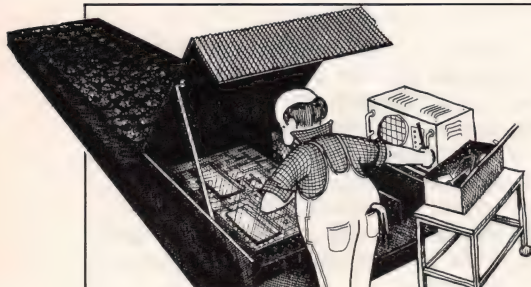
At One Stop Micros in London's West End, manager Shahid Gilleni also found that to be the main problem, along with ULAs

continued next page



Microdrive and the quality of the tape used in the cartridges have been a continuing headache; the fragility of the tapes has caused trouble, including loss of data. The only real solution, especially for small business users, may be to switch to disc drives instead.

REPAIRS



continued from previous page

blowing-up. The company provides a two-day turnaround with prices starting at £28.75. A N Electric of Aldershot quotes a price range of £60-£80, plus VAT, plus spares — almost the price of a new, cheap micro.

Edgware-based Suredata expects repair work from foreign users now that foreign-language ROMs such as Spanish and Italian are being planted in QLs. It swaps ROMs for £5-£10, bearing in mind that the ROMs are the plug-in type, rather than being soldered-in.

Other companies you could contact are Hemel Hempstead Computer Centre, which

estimates prices at around £40 with a three-month warranty and 24-hour turnaround, and Micro System Maintenance at Swindon, which charges on a basis of £25 an hour for labour, plus parts.

Meanwhile, GST of Cambridge, the systems house which developed the 68KO/S system for the QL, has been talking to Sinclair about doing official maintenance work.

"Sinclair is very interested in GST taking on official maintenance of the QL and we are keen to do it, but no contract has been signed yet," says GST technical manager Alan Duncley. "The basis on which we would do the work and the rates we would charge have not been decided but we are negotiating directly with Sinclair."

Talking to users, it seems that Micro-drives are more likely to give problems than other parts of the QL. They become very hot and tend to mess up the drives and the tapes and the speed of the drive can go wrong, too, so watch for that. In addition, you may find the tops of keys working loose and trying to get away.

Bear in mind that Sinclair machines have a habit of being temperamental about add-ons; i.e., do not crowd them with peripherals or they might get mad and go bang. The problem, thankfully, is less pronounced on the QL than on the Spectrum but it is still there and it is best not to attach too many things at the same time to your QL.

In the final analysis, it is good to see a number of companies willing to undertake QL maintenance at competitive prices and with seemingly quick service.

A N Electric, Aldershot	0252 25608
Capital Computer Services, Cardiff	0222 614401
Computer-Fix, Camberley	0276 66266
Domestic & General Insurance Co	01-946 7777
Enfield Communications, Middlesex	805 7772
Hemel Hempstead Computer Centre	0442 212436
Micro Repair Club, Ascot	0990 28102
MicroServ, Denny, Scotland	0324 823468
Micro System Maintenance, Swindon	0793 45346
Minnie Micro, Southend-on-Sea	0702 62033
One Stop Micros, London W1	01 631 5379
Suredata, Middlesex	951 0124
Zedem Computers, Bedford	0234 213645

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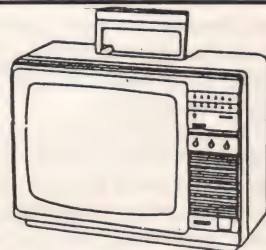
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Creating your own animation

The scope and range of QL leisure software is expanding and Jason Ball reviews some of the latest offerings, as well as providing information about a sprite designer, Zappit, to help in the creation of your own animation for SuperBasic programs.

ZAPPIT is a powerful £14.95 sprite designer for creating animation within SuperBasic programs. For those who are relatively clueless about programming, a sprite is an animated character whose size and shape is defined a number of times, so when drawn in quick succession it appears to move.

Zappit allows the creation of any number of sprites, which are incorporated into programs using commands added automatically to SuperBasic. The only limit is on the number of sprites displayed on the screen at any time, once in SuperBasic. Each sprite is first defined in a sprite movement file, before its shape is put into a sprite shape file.

The documentation is rather short — four small pages — but at least it is concise and gives most of the necessary details. A short description of sprites and their applications would have been useful but anyone buying the program should already understand them.

The introductory screen is spectacular, despite its simplicity, displaying the power of the generator clearly — stars are scrolled

at different speeds giving a 3D effect. Once the sprite definition program has loaded, various questions are asked to set up the sprites. It is important to determine the exact location and movements of your sprites on graph paper beforehand, since each sprite will have individual characteristics. Once the number of sprites is decided

— i.e., you may want 10 invaders or a single bat and ball — the 'X' and 'Y' size and position of each sprite is entered. Their movement is defined by inputting the number of pixels each sprite will jump in a chosen direction.

The sprite movement file is then used to create a sprite shape file, defined using a separate part of the program. That permits each pixel of the sprite to be drawn in one of eight colours; both a true picture and an exploded view of the sprite are displayed.

The instructions concerning that section were non-existent and it was difficult to understand the system from the commands displayed on the screen.

Once the files are finished and you have edited the start program to include the names of your files, it remains only to run the program; typing NEW incorporates the commands into SuperBasic.

The program is functional, performs well, but is not easy to use and the best part seemed to be the demonstration. For anyone producing games which incorporate moving graphics, however, the program is a real time-saver and well worth considering.—
Jason Ball

● Zappit, Quest Automation, PO Box 49, Torquay, Devon, TQ1 4UR.

continued on next page



Spectacular graphics

PAIN MASTER is a collection of programs all involving graphics used in various ways. The most important program in the £14.95 offering from Shadow Games is Graphics Design, a drawing program for pictures which may be incorporated into other programs.

From experience I would suggest that there are two categories for painting programs. The first is for the creation of pictures pixel by pixel, with a few commands for circles, lines and so on. Second, there are those bearing a closer resemblance to conventional artwork in which pictures are created as one might use a brush or pencil.

By far the most spectacular graphics are created by the first category programs but they involve an enormous amount of work. The more practical approach of Paint Master puts it into the second category.

The Paint Master 16-page manual gives clear instructions as to how the programs are used. The first is the main Graphic Design program with its various commands. Most of the screen is used for the picture, with a few lines at the bottom reserved as a status area. Initially you are asked questions to set up the system and load any previously-drawn pictures.

The commands available are viewed by pressing F5 and selected by their first letter. Two cursors are used on the screen at once, so arcs, boxes, lines and triangles may be

drawn between them. Among the more enjoyable features is the circle option which lets you stretch or rotate a circle in any direction, and the position command which allows a picture to be enlarged, reduced and re-drawn anywhere on the screen.

Text may also be added to the pictures, for explanations or adventures. In addition, there is a small game demonstrating the incorporation of graphics into a text adventure, together with programs used to incorporate pictures into other programs.

Finally, there are three demonstration pictures displaying the exciting graphics capabilities of the program.

As a cheap graphics program Paint Master has much to offer and the idea of demonstrating its capabilities is good, but anyone wanting to draw pictures seriously would find Graphic Design slightly tedious to use.

There is a danger of becoming disenchanted with the program very quickly, since few good effects can be produced, and the program seems to run out of memory if you draw anything but the simplest pictures. It is well-presented, however, and easy to use, providing a starting-point for newcomers to computer graphics.

Paint Master is available from Shadow Games, 70 Gooseacre, Cheddington, near Leighton Buzzard and the company can be reached by telephone on 0296 668740.

ties — or lack of them.

Zapper is available through Eidersoft, The Office, Hall Farm, North Ockendon, Upminster, Essex RM14 3QH.

Playability	* * *
Graphics	* * *
Addictiveness	* *
Documentation	* *
Overall value	* *

Reversi is a QL first

REVERSI is a version of the classic Othello game which has been created exclusively for computers of all types, since it is impracticable to play the game any other way. This version for the QL is the first to appear for the machine.

The game is played on a checkerboard on which two-sided pieces — black on one side and white on the other — are placed. Each player controls one colour and the object is to make all the pieces reverse so that they appear in your colour. You do that by placing your pieces so that they sandwich those of your opponent.

The software has a professional appearance, with highlighted windows offering several options. It permits you to play either another player or the computer; the latter is far more difficult — my partner beat me, the computer wiped me out.

The time the computer takes to make its move may be varied — anything up to two hours. Unfortunately if you put it on to a high level like that, the computer really takes its time and you can re-set the machine only to interrupt it during play.

After a long, hard game, you are simply told 'Black wins' — or white, depending on your standard of play — before the menu reappears, an anticlimax if ever there was one. At least it makes a change from the ridiculous and sometimes patronising comments some programmers make.

The package is well-presented and playable but I have doubts about the game, as there seems to be bias towards whoever moves first. For something completely unusual and entertaining, it is certainly worth considering.

QL Reversi sells for £12.95 and is available by mail order from Sinclair Research or major Sinclair stockists.

— J.B.

Playability	* * * *
Graphics	* * * *
Addictiveness	* * *
Documentation	* * * *
Overall value	* * * *

Dodging those aliens

ONE of the first space invader-type games for the QL, *Zapper*, like those on most other computers, looks a little quaint these days. The £10.95 program was written by Janko Mrcic-Flogel, the unforgettable name which first appeared as the author of the popular *QL Caverns* arcade game, and a little more a straightforward invaders game was expected from him.

It is in a well-presented package and opens with a spectacular introductory screen but from then onwards the program follows the aliens downhill. Mrcic-Flogel apparently has used a sprite generator to create a vast number of characters which resemble nothing in particular, on earth or in space. They appear in screensful, all the same in any one screen — descending quickly while you avoid them using the cursor keys, shooting at them with the space bar, or using a joystick.

Each alien moves downwards in a random zig-zag fashion, which tends to stick on zig

or zag. The space bar is such a big key to use to fire and the response was so slow that it is easier to keep the bar pressed, firing single shots at random.

That meant that the only real skill involved was dodging the falling aliens so they could reappear further up the screen but they had a habit of resisting missiles just when they were most needed to be hit, so taking away another of the three miserly lives.

It gets worse; sound is not always emitted when a missile is fired and, once fired, a missile had to hit something or reach the top of the screen before another could be unleashed. Even the oncoming aliens were bored — they could not be bothered to fire back.

People should not be foiled by the good presentation of the package. It seems that after his initial success with *QL Caverns*, Mrcic-Flogel has issued this hastily-produced second without considering its quali-

How to improve your Bridge

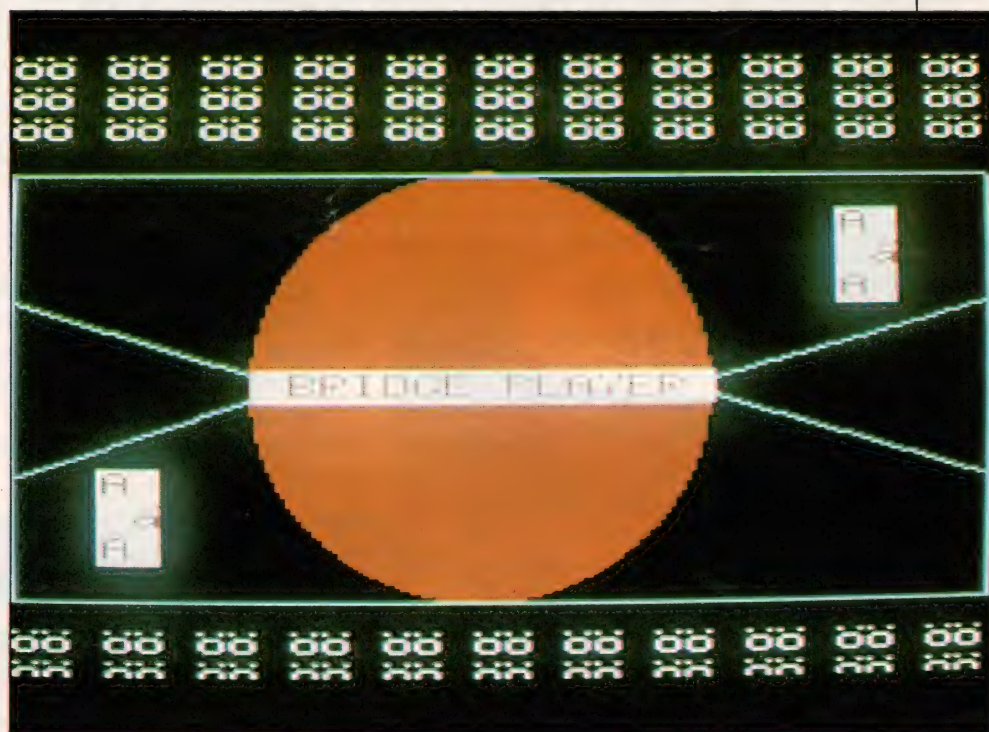
BRIDGE PLAYER from CP Software brings the famous game of bidding and strategy to the QL. Although the program will not provide you with the obligatory green velvet table-tops, crystal ashtrays and glasses of brandy which usually accompany a good round of Bridge, it will give you a creditable challenge.

The program arrives in a conspicuous black-labelled case designed to attract the discerning player. No instructions are included with the Microdrive cartridge; they are entirely in the program, although some appear on the cover of the package. As the commands are incorporated in a separate Microdrive file of instructions, you cannot refer to them during play unless you print-out the instructions file at the start.

The simulation is designed to cover bidding and play of Contract Bridge, using the bidding system of the Stayman and Gerber conventions. It is important to emphasise that the game is not designed for beginners learning to play bridge — it is written for experienced players who want to improve their game and perhaps add some variation to it.

The program is well-presented and includes some useful variations, such as the chance to re-play your hand or let the computer play it for you.

Bridge Player is an excellent opponent for any experienced player and a worthwhile



investment if you want to improve your game but is not designed to teach and is not suitable for players unfamiliar with the rules.

Bridge Player is available from CP Software, 10 Alexandra Road, Harrogate HG1 5JS.

Playability	* * *
Graphics	* * *
Addictiveness	* * *
Documentation	* * *
Overall value	* * *

Meteor Storm for arcade fans

THE QL SOFTWARE scene finally seems to be moving forward in the arcade games department. Several original pieces, if original only to the QL, have recently reached the market as the QL power and potential is exploited.

One new company is Arrakis, which has produced a version of the popular *Meteor Storm*, a machine code arcade game closely resembling the programs of the same name for other home computers.

Written by Steven Hollywood and Ian Williams, the game puts you into The United Solar Spice, Mining and Space Pilot Training Academy, from whence you are sent on a short test mission in the meteor belt. Deadly mission would be a more appropriate description, since you invariably die, but I assume there is warning of that somewhere in the title.

While flying round the screen, using the

cursor keys or a joystick, you must destroy all the meteors without being hit. Unfortunately when you shoot a meteor it explodes into many smaller pieces, which have a nasty affinity for your ship and must also be hit to clear the screen.

On completion of your task, you start again with a few more meteors to contend with. Since it is the only meteors-type game on the market available for the QL, I can compare it only to the same game for other computers.

Previously I always found this type of game impossible, since my triangular ship would spin out of control as soon as I applied thrust to avoid a meteor. In this version, however, dampers appear to have been placed on the keys, so it is much easier to maintain a steady speed and to change direction.

The menu gives various options which

are selected using cursor or joystick controls. The sound may be cancelled and the instructions or controls can be displayed. A demonstration of the game is also given if no keys are touched.

Meteor Storm proved to be much less difficult and more playable than I expected and I found it addictive. Apart from the terrible sound, which is not entirely the fault of the programmers, the program is excellent in its ease of use and appearance — especially the graphics — and extremely playable.

The program costs £12.95 and is available by mail order from Sinclair Research or at Sinclair stockists.

Playability	* * * *
Graphics	* * *
Addictiveness	* * * *
Documentation	* * *
Overall value	* * * *

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First fully-compiled Pascal system

THE FIRST fully-compiled Pascal system has just been released by Metacomco, the Bristol-based company responsible for the QL BCPL compiler, two LISP interpreters and a very popular macro assembler. The compiler costs £89.95 and consists of the compiler, a screen editor, Pascal run-times linker and a large manual. Part of the compiler is held on an EPROM cartridge which plugs into the ROM socket at the back of the machine. The EPROM holds various parts of the compiler and does not need to be present when compiled programs are run.

The compiler follows the ISO specification, which is widely regarded as the Pascal standard, and compiles to true 68000 machine code. That means the programs produced by the compiler will run much faster than those produced by other compilers in most cases.

The entire package is written in the BCPL language, which means that Pascal program segments can be linked with BCPL and Assembler modules to improve the per-

formance in critical areas. The manual is very comprehensive, detailing the use and installation of the compiler and linker, and then describing accurately every aspect of the syntax and semantics of the language.

Anyone used to programming in a block-structured, high-level language should be able to adapt to QL Pascal with no problems. Finally, details of the ISO extensions are given, which are machine-specific and compiler-specific procedures, functions and variables — collectively, pre-defined identifiers — which are not covered by the ISO specification.

Useful routines

They include useful routines to interface closely with QDOS, including screen- and window-handling. It would not be too difficult to add job control procedures, something which has already been done by authors using the BCPL and assembler packages.

Pascal is a very popular language which is taught in almost every further education establishment in the U.K. It was written in

the early 1970s, predominantly by Niklaus Wirth in Zurich, although some would say that Wirth was implementing the ideas of others, such as Hoare and Barron.

Pascal features strict control over the programmer and strong typing. A strongly-typed language is one in which it does not allow the assignment of one type data type to another, such as characters to integers, and so on.

Pascal has a number of those data types, the most basic being Integer, Char and Boolean. An integer is a whole number between pre-set limits, a char is a character-sized item, and a Boolean value is either true or false.

Other types include Real, which are floating point numbers, and Array, which is analogous to a Basic array in that it is a contiguous group of elements of the same data type. Further composite types can be built using Records, similar to C structures, and pointers.

From a personal point of view, I think Pascal has a distinct disadvantage in being strongly typed. In languages such as BCPL



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LANGUAGES REVIEW

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which has no types, and C, which is typed arbitrarily, the programmer can do almost anything he wants, even if it does not make sense. Pascal will not permit you, reporting errors at the slightest provocation. It is also notoriously bad at handling input and output, mainly because the schemes for implementing I/O are part of the language. Other languages, notably C and BCPL, take the much more powerful step of relying on a function library to deal with I/O.

Nevertheless, Pascal is undeniably popular and has been used for writing all kinds of things from word processors to an operating system—the UCSD p-system. It is useful as a teaching language because it restricts the programmer, which tends to lead to a logical method of programming. It also personifies the block-structured idiom, having acquired most of its good ideas from an earlier language, Algol.

That is a personal view and there are many people who disagree with me. Pascal can do most things and it leads to programs which are easier to maintain than those written in other languages. It also has the

advantage of being compiled, unlike Super-Basic, so programmers take to it as it will lead to faster and often shorter programs.

Pascal is particularly good at implementing data structures, with the pointer type being the ideal basis for a linked list. It is never exactly succinct but it is always clear what is happening. Comments, although recommended, are not always vital to an understanding of the program flow.

Three compilers

There are now three Pascal compilers available for the QL, although the Metacomco one is the only one which produces native 68000 machine code. The compiler suffers from being rather large, which means it takes over the screen as its workplace unless you have a memory expansion board. That is manifested during compilation as strange coloured lines appearing all over the screen. Do not worry—it is supposed to be like that. The bottom of the screen is left for messages and operator input and the option to re-start the compiler is given after each compilation.



The output of the compiler is a BCPL binary module, which must be linked with the run-time system using the supplied linker, PASLINK. That permits you to include other modules, perhaps produced by the compiler, perhaps by the BCPL compiler, or perhaps from the assembler. They are combined into an executable machine code file which can be run subsequently with the EXEC and EXEC_W commands.

The fact that the compiler is ISO specification lends a good deal of credibility both to it and to the QL and it should be regarded as a good thing, whether you intend to program in Pascal or not.

Those who are committed to the language will find the package excellent value and a wonderful tool for program development. Those who, like me, prefer other languages, will be delighted to know that Metacomco is soon due to release the Lattice C compiler for the machine.

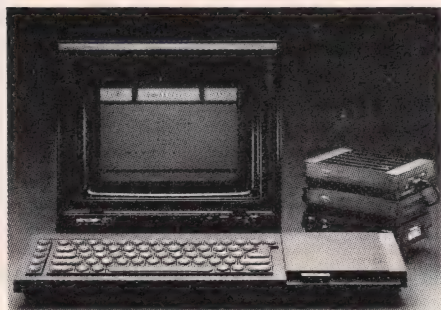
COMMUNICATIONS SINCLAIR QL

Thanks to Tandata you can now convert your QL into a powerful and comprehensive communicating terminal. You can contact distant databases such as British Telecom's Prestel system, private viewdata systems, traditional ASCII databases and electronic messaging/mail services such as Telecom Gold. You can even replace your existing

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The three smart modules have been designed to match the QL in style and for added convenience they stack together using vertical bus connectors without the need for interconnecting cables.

The modules are available separately, but by using all three as a complete matched



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Telephone: 06845 68421. Telex: 337617 Tandat G.
Prestel *799# Telecom Gold 81: TAN001
A subsidiary of Tandata Holdings plc.

system full advantage can be taken of the integrated features of the Q-CONNECT's software.

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QW10

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MEDIC

- leaders in QL expansion

- introduce Winchester

The MEDIC Winchester hard disk

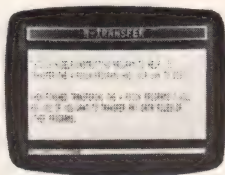


Free Business Software

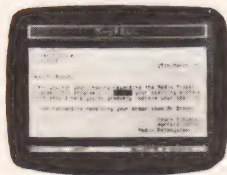
Nine performance-raising programs, free with every MEDIC disk drive system. (Extra memory recommended.)



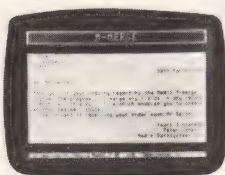
M-DESK



M-TRANSFER



M-SPELL



M-MERGE

M-DESK Macintosh-type single-key depression user interface, for instant program switching and utilities selection **M-BASE** turns Archive into a menu-driven database with single-key commands **M-ACCOUNTS** fully integrated sales, purchase, nominal ledgers, and stock control **M-KEY** single-key entry of user-defined text in any program **M-SPELL** spelling checker **M-MERGE** personalised mailshots **M-SQUEEZE** file compression **M-BOOT** sets up RAM disks in memory then automatically loads pre-defined files and programs **M-TRANSFER** microdrive - disk routine.

MEDIC - leaders in disk drives and expansion systems for the Sinclair QL - now introduce a Winchester hard disk which gives a full 5 MB of formatted text/data storage, enabling the QL to be used in major business applications.

At only £299.95, including interface, the new MEDIC Winchester is amazing value, turning the QL into a full-scale business machine. The MEDIC Winchester offers a very fast transfer rate (256 kilobytes/second) and stores valuable data more safely than either floppy disks or microdrives.

The new MEDIC Winchester ensures easy data location and access through its sub-directory capability (can be configured to emulate a series of floppy disks).

THE MEDIC EXPANSION SYSTEM

"Medic have set out to manufacture the definitive expansion system and have to a large extent succeeded." (QL User, August 1985).

Fit a Medic expansion system - via the unique plug-in system cartridge - to your Sinclair QL, and you immediately transform it into a fast, powerful business machine.

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The draw will be made by Tony Tebby, author of the MEDIC disk operating system. A full list of winners will be published in both QL User and QL World. A complete MEDIC system - usual price £249.95

comprising 1MB disk drive (720K formatted), MEDIC system cartridge containing disk interface and parallel port, power supply, plus complete suite of MEDIC business programs - together with hi-res green-screen monitor - will be sent to each of the first ten names drawn.

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Printer Cable QL parallel printer cable £14.95 ☐

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Please send me the items I have ticked on this order form and I agree to pay cash on delivery. I am over 18.

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ADDRESS

TELEPHONE (Area code) (No.)

All sections must be completed, PLEASE USE BLOCK CAPITALS.

There is no need to feel disillusioned

Communications is becoming an increasingly important field for QL users and *QL World* is keenly aware of your interest in it. Our previous issue featured communications on the cover and from this issue we institute a column written by communications expert Tony Dennis, an old hand at micro-computer communications who set up the popular CABB bulletin board for *Computer Answers* when he was technical editor of that magazine.

THERE IS no need to feel disillusioned after buying a modem then finding almost nothing to call up. A little patience and practice will reveal that there is plenty to interest the QL owner. The obvious starting-point is bulletin boards, since they make no charge for accessing the system. Most operate at 300 baud only but a growing number offer both 300 and 1,200/75 access.

The boards are run by enthusiasts who have connected their micros via a modem to the telephone line and started an electronic messaging system. At present, no-one seems to have succeeded in using a QL to host a bulletin board. For that reason I have listed mainly those boards running on Tandy and CP/M machines. They are generally some of the longest-surviving boards and cater for all makes of micro. They all have special interest groups, often called SiGs, including ones for Sinclair owners and even QL owners in some cases.

Apart from the SiGs, boards will have somewhere an open message section for all callers to use. There are always short cuts to finding messages pertinent to your interests. On TBBS systems, follow this procedure; first, scan the message headers using 'QL' as the string. Then mark the messages which look relevant. After that read 'marked' mes-

sages and you will have saved a considerable amount of unnecessary searching.

Other areas of interest are sales and wants, where you can buy or swap gear; lonely hearts — fairly limited, since scarcely any women are on-line; and problem areas where you can leave pleas for help with software and hardware difficulties.

For QL owners who have only Prestel software, there are a number of options. Communitel software, which imitates a Prestel host, is being used by the ITes as well as some enthusiasts. Since it runs on the BBC micro, there will not be a great deal of direct interest to QL owners. Nevertheless, Prestel-compatible services are also being run by local authorities such as London's Hackney. If you live in the area, it is a very



useful way of finding what is happening. Alternatively, if you fancy a holiday in Rochford, Essex, you could try calling C-view. As the services are free, it is a way to start while you wait for your Micronet passwords to arrive.

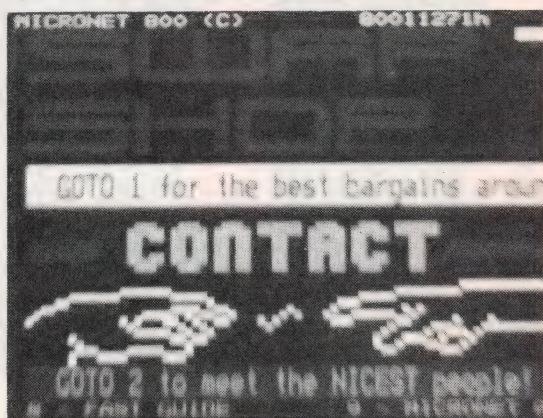
The Tandata modem package, which is also the prize in this month's communications competition, gives users access to Prestel, a viewdata service run by British Telecom. The cost to join Prestel is £18 per quarter for business customers and £6.50 per quarter for residential users. Between 8am and 6pm on weekdays and 8am to 1pm on Saturday it costs sixpence per minute for access time; otherwise it is free.

Micronet 800 is the specialised section of Prestel microcomputing aimed specifically at the micro enthusiast. As such, one of its best sections is the news, which almost invariably has all the hard facts and trivia on the microcomputer industry before everybody else. There is also a telesoftware section which includes both free and purchasable programs. QNET is catering in part directly for QL users where you will

find the relevant software. At the time of writing there were only three programs available.

Go directly to page 800401 for the QNET menu. There you will find news flashes, features, feedback and the Quanta section. Access to Viewfax Clubspot run by the Association of Computer Clubs and the education service School Link is included with the Micronet subscription. Fortunately Micronet possesses about 15,000 loyal subscribers, so there is always plenty happening.

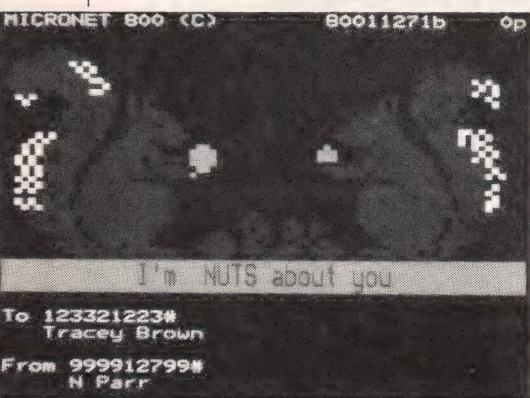
Elsewhere in Prestel, page 77 to be precise, is the mailbox. All users have a mailbox number free and if a message is waiting it will be flagged immediately you sign on. The disadvantages are that the system interprets a carriage return as the end of a message and there is no on-line text editor. It is possible to use the Prestel mailbox to send a Telex message to someone in the U.K. and by the end of 1985 it should be possible to



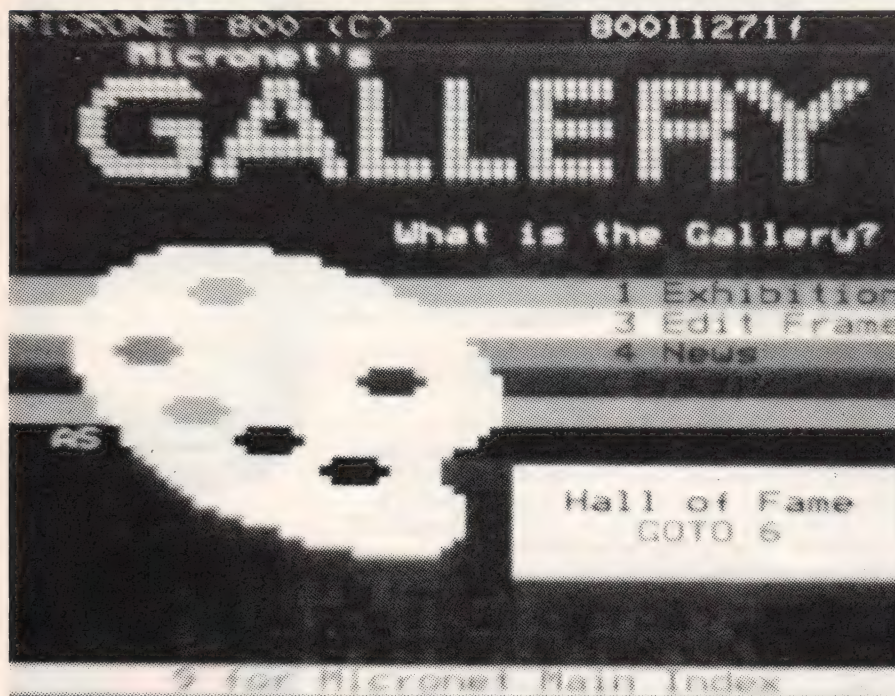
receive and send Telex messages anywhere in the world.

Other services well worth checking on Prestel are the Nottingham Building Society Homelink banking system. The society also runs a bulletin board in conjunction with the Channel 4 '4 Computer Buffs'. Also worth looking at on Prestel are those pages run by Timeframe International, such as Modem Poser, which tells enthusiasts what they can call.

The more serious QL owner might consider subscribing to an electronic mail service like Telecom Gold, One to One, Easylink or Comet. They are very useful for sending messages to more than one person at a time and, unlike bulletin boards, provide simultaneous multi-user access. Sending and receiving Telex messages is another good reason for joining.



ioned about modems



If you are prepared to pay dearly for the service, there will inevitably be a database somewhere holding on-line the kind of specialised information you seek. Particularly popular are stock and share prices — Citi-serve; legal information — Lexis; world news — Fintel; and medical information — Colleague.

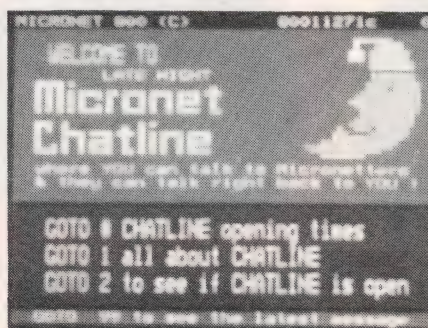
Perhaps the most useful for micro users is Knowledge In-

dex, a cut-down version of the mighty American Dialog database. It is packaged so that U.K. home users can call it in the late evening and early morning with the cost of the data link to California included in the subscription.

In the U.S., The Source and Compuserve are very popular, since their range of services dwarfs even Prestel. It is possible to subscribe from the U.K. but going through the BT data network — Packet SwitchStream — is advisable.

North America has a wealth of bulletin boards, too, but a modem which supports Bell frequencies is necessary.

Finally, for the really adventurous there are some European bulletin boards. I would recommend one run by some Dutch Sinclair enthusiasts which is Prestel-compatible. Call it on 010 31 038 223345, and good hunting.



Boards to interest QL users

CBBS (R) systems

South-west, tel: 0392 53116 Sysop, Boyd Hitchcock.*
Computers Inc, tel: 0207 543555 Sysop, Trevor Smith.
London West, tel: 0895 420164 Sysop, John Boulton.
Chiltern, tel: 07073 28723 Sysop, Alan Walker. Hours: 2100-0800.
Surrey, tel: 04862 25174 Sysop, Mike Parker.

TBBS systems

Blandford, tel: 0258 54494 Sysop, Leo Knaggs.
North Birmingham, tel: 08277 288810 Sysop, Paul Smith.
Sanctuary, Egham, tel: 0784 38110 Sysop, Barry Brumitt.
NWBBS, Lancaster, tel: 0524 822336 Sysop, John O'Connor.
Mailbox-80, Liverpool, tel: 051-428 8924 Sysop, Peter Tootill, 300 or 1,200 baud.
The London Bulletin Board, tel: 01-348 9400 Sysop, John Nolan.
System CBB, tel: 01-301 4110 Sysop, Dave Coles.
Micro Live, tel: 01-579 2288 Sysop, BBC tv.
Microweb, tel: 061-456 4157 Sysops, Mike Bibby and Alan McLachlan.
MOBB, tel: 061-736 8449 Sysop, Ken Farnen.*
PIP, tel: 0742 667983 Sysop, Quentin Reidford.
London West Technology Centre, tel: 0895 52685 Sysop, Iain Philips.

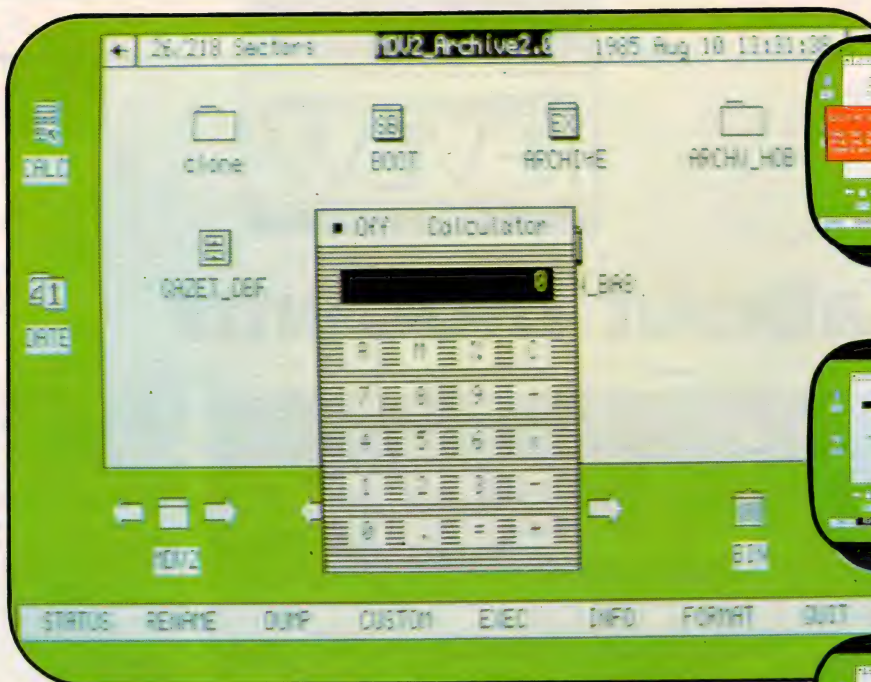
Other systems

SABBS, tel: 0243 511077 Atari board Sysop, Jon Sanders.
Estelle, tel: 0279 443511 300 baud, or 0279 441188 1,200/75 baud, run by STC Electronic Services, office hours.
Forum-80, Hull, tel: 0482 497150 Sysop, Fred Brown, Tandy-based; hours 1700-midnight, except Sunday 1200-midnight.
Distel, tel: 01-679 1888, run by Display Electronics.
London ABBS, tel: 01-373 6337 Sysop, Pip Coudrey using Let's talk!
Beeboard, Manchester, tel: 061-427 1596 Sysop, Robert O'Donnel, BBC micro-based.
C-View, tel: 0702 546373 Sysop, Rochford District Council; Prestel-compatible 1,200/75 baud only.
Stoke, Remote CP/M, tel: 0782 265078 Sysop, Ian Hickman, run by Stoke ITeC.
Communitel, tel: 01-968 7402, Demo board for its viewdata host software, 1,200/75 baud only.
All systems are 300 baud and a 24-hour service unless otherwise stated. *indicates dual 300 or 1,200/75 baud service.

ICON

CONTROLLED

ENVIRONMENT



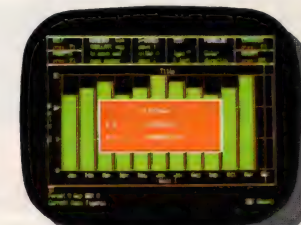
Intelligent error messages



Multitasking clock full range of QDOS functions



Folders allow action on multiple files



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ICE is a Fully Icon Based Desktop Manager and Front End for QDOS

ICE makes all of the day to day tedious computer housekeeping (eg. deleting and copying files) you need to do simplicity itself. By using pictures (Icons) to represent the functions you want and the files on your disk or microdrive, all you have to do is point and click, instead of typing reams of mysterious commands. ICE is extremely powerful and can take action on many files at the same time, saving you hours each week! ICE gives you an inbuilt multitasking clock, calendar and calculator for up to the minute efficiency.

ICE also includes the powerful CHOICE tasking software that allows you to run several programs simultaneously!

ICE comes on EPROM cartridge that plugs into the cartridge ROM port at the rear of the QL.

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☐ tick if you require disk drive system information


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
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QL11

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New - a professional specification C Compiler for the QL! Designed by  LATTICE®, QL C is a complete implementation of the Kernighan and Ritchie definition of C. QL C is endorsed by Sinclair Research; it is the most powerful and fully featured C compiler available for the QL.

- > Complete Kernighan and Ritchie implementation.
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- > Chosen by Sinclair Research as the C Compiler for the QL.

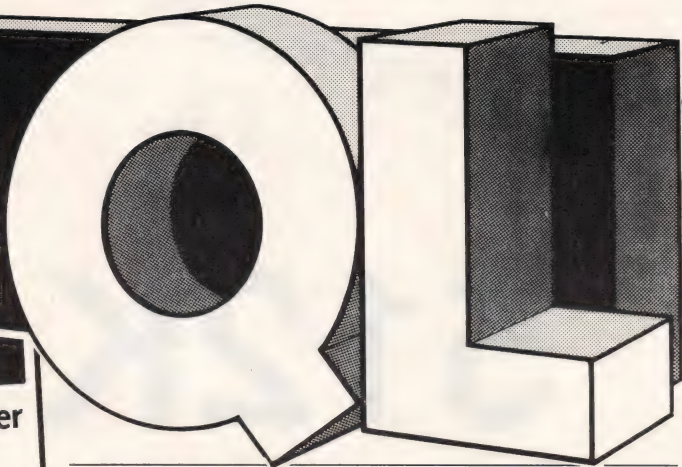
Every DEVELOPMENT KIT includes Metacomco's popular screen editor, and a detailed manual. All KITS will operate either on a standard QL or else using QL peripherals such as floppy disks or memory expansion.

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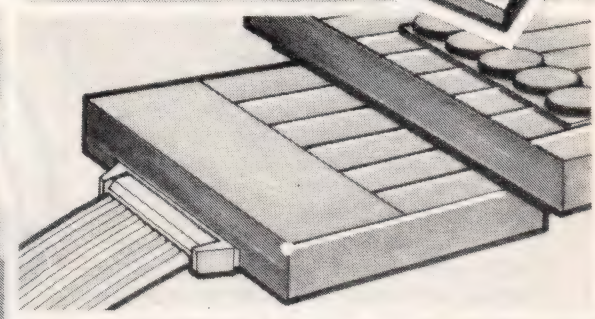
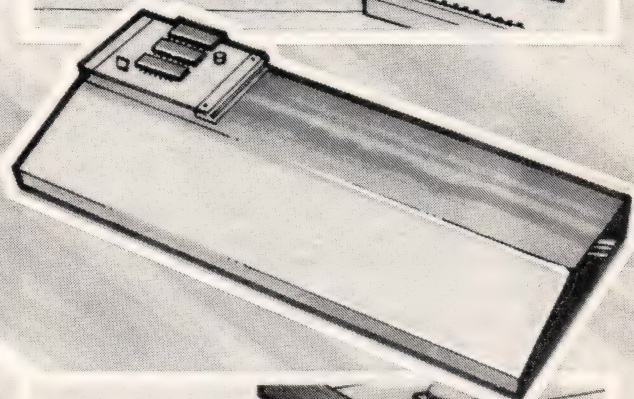
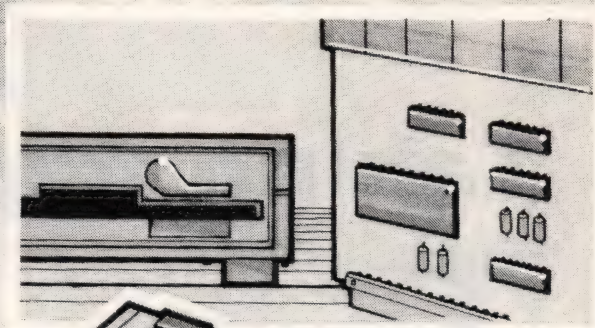
QL Future Growth

New horizons for your microcomputer from CAMBRIDGE SYSTEMS TECHNOLOGY, the dedicated specialists in expansion peripherals for the Sinclair QL.

CST who were the first on the market with a disc drive controller, a Centronics port and a fully operational IEEE-488 interface, now offer the Q+4 multi-way expansion module. With four fully-buffered ports, the Q+4 is fully compatible with QL add-ons and features a controller ROM functioning with any version of the QL operating system. Built into a rugged matching case, the Q+4 is designed to sit beneath the computer.

The CST Q-disc is the first controller to allow standard disc drives to be connected to the Sinclair QL, via the QL expansion port. The Q-disc offers extensive file handling and random access facilities plus an essential utility disc and a comprehensive manual.

The Q-488 is a fully implemented IEEE-488 interface which permits the Sinclair QL to communicate with scientific and industrial equipment offering extensive help facilities plus comprehensive error checking.



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• Circle No. 113

Taking steps against piracy

THANKS to the organiser, Montbuild, and the Association of Computer Clubs, we had a free stand in the club section of the PCW show. Several members helped me on the stand and we managed to convince 113 QL users that membership of Quanta was a good thing, resulting in them signing on the spot.

Many more users took away our application form, so we expect to gain a total of more than 200 new members. Sid Day, our software librarian, was available for most of the show and many members were able to obtain up-to-date copies of the library list and some of the library cartridges, if we were not too busy.

- The otherwise excellent Metacomco/Lattice QL C compiler lacks a Qdos function library so I am co-ordinating the development of a comprehensive library which will give members using QL C all the functions available in SuperBasic.

Several members with C experience have each agreed to code six functions and we should have the project completed in two weeks. The functions will be available in both source code form and as a library module, which may be linked to members' programs. The calling parameters will be the same as those for the GST QC compiler to ensure compatibility.

- We have negotiated several very favourable discounts with suppliers of QL software and hardware. Members taking advantage of the discounts will find that they save the cost of their subscription many times over.

- John Downie has pointed out that, with most printers, you can get as many control codes as you wish out of Quill without using the TRANSLATE option. Epson-compatible printers use only seven bits out of the eight sent to them and therefore treat chr\$(128 to 255) like chr\$(0 to 127).

To send chr\$(0) to your printer, just type chr\$(128), CNTRL/ESC. To send chr\$(27), type chr\$(155), CNTRL/;, and so on. The appropriate keys are given in the Concepts section of the User Guide, under character set.

- Several members have encountered a rather irritating bug in Archive 2.00 which causes a record which has been ALTERed to duplicate itself and deletes the first record in the file. Psion has a patch which corrects the bug.

The patch appears not to work, Psion tells me, but if subsequently you save and re-load the file, all is well.



- From November 8-10 we are holding a weekend workshop at Milton Keynes. The venue is the Post Office Technical Training Centre and accommodation and meals will be available, or members may just visit for the day. The programme will include sessions on Archive, Assembler and C. Tony Tebb will be available to answer questions about the inner mysteries of Qdos, and two Super-Basic compilers will be unveiled by their respective authors.

One — possibly two — hard discs for the QL should be on show and we hope to be able to tell members how to perform a DIY internal 512K memory transplant, at a cost of about £80.

We are a little concerned about the possibility of software piracy at our meetings and in future all members attending workshops will be required to sign an undertaking not to do any unauthorised copying. If anyone is found to be indulging in such activities, they will be expelled from the meeting and their membership will be revoked. We have an excellent relationship with many software houses and we do not want it jeopardised.

- Still on the subject of piracy, we have discovered that a user group in Europe is hiring copies of commercial software to

members. We have informed the software houses concerned but unfortunately they can do nothing about it. We, however, will be cancelling the group's membership of Quanta, unless it agrees to cease the undesirable activities. We have also found that a Spanish organisation, which has two subscriptions to Quanta, is photocopying our newsletter and selling it in Spain. We are getting tough with it as well.

- The group software library now stands at 24 cartridges. It is expanding so rapidly that we have ceased trying to produce a printed library list and the list is available to members on two Microdrive cartridges, as two large Archive files.

To give some idea of the rate at which it is expanding, our software librarian, told me on the first day of the PCW show that we had 23 cartridges. He had received sufficient programs by the second day to fill another cartridge. I should stress that all programs in the library have been donated by our members, or typed-in from listings published in magazines with the permission of the copyright owners.

- Ron Dwight, one of our most accomplished assembly language programmers, has donated some very useful SuperBasic extensions to the library which permit the user to save and load screen images to and from Microdrive or disc in compressed form. Up to 50 percent savings are possible, which would be very useful when writing games. Screens load very much faster into the bargain.

- Another of our members, Barry Ashfield, is selling a superb program which allows users to program any key with a string of up to 2K bytes. He sent copies of the program to 10 publications but none reviewed it. We did — it is in this issue. It is selling well to members, who appear to be delighted with it.

- John Tanner has compared the QL to the latest PCW benchmark figures. For what it is worth — I do not think benchmarks are very meaningful — the QL was third on average timings — averages are a bit dubious with such data — and was beaten only by the Olivetti M20 and the Digital Equipment PPD-11/34 mini.

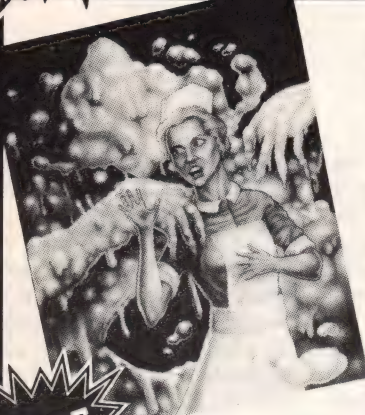
- Membership of Quanta costs £6.75 for six months or £13.50 per year and subscriptions or enquiries should be addressed to Brian Pain, 24 Oxford Street, Stony Stratford, Milton Keynes, MK11 1JU. Tel: 0908 564271. — Leon Heller.

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Most machines are bought for work

THIS IS a plea from the heart. I will get to the plea later but first let me say I was more than pleasantly pleased to receive *QL World* for several reasons. First, the content was well worth reading and businesslike; second, an unannounced surprise of six months' free issues is always welcome; third, and most important, as a businessman I felt I was being treated like an adult consumer of business computing instead of a dedicated hacker.

I appreciate, too, the fact that much thought has gone into the launch and marketing of the magazine. It is this—and I mention the phrase, again without apology—businesslike approach which appeals; after all, we, the QL consumers, did mostly buy our machines to work with and not play.

I see with anguish you are asking and are prepared to pay for programs and program listings. It is this thing that I plead with you to change. We do not want a magazine full of self-type games programs full of self-inflicted mistakes. Please do not fall into the same trap as all the other magazines of treating us like children who want to spend

Catering for all

I COUNT myself lucky having received the first issue of *QL World*, not that it was free but because it is a new kind of reading which gives much detailed information, is easily understood and excels all other so-called computer magazines.

I believe that your magazine caters for all kinds of users but not sufficient for the business-minded. Thanks again for a pleasure-to-read magazine and I look forward to receiving not only the next few issues, but also the ones in year 2000 and beyond.

**Bubi Valerius,
Barking, Essex.**

all their waking hours typing new programs which are of little use. We do not.

Many of us will never find the time or the desire to learn a program language nor could we ever hope to write the sophisticated business software we want and need, now and in the future. We will not want to learn about Fortran, Pascal, C, D, E, F... Y, Z or any other language. Therefore I would like to encourage you to start catering for those who intend just to operate our machines and make them work for us.

What we need is a magazine to help us manipulate and make the best use of our machines and the programs we received with them—a journal to tell us of the latest professionally-written programs as well as professionally-tested software reviews to help us choose those most appropriate for our business use.

If you feel it necessary to supply listings, it must be possible to print them on a supplementary insert so those of us who will never use it can throw it away and keep our magazine for reference purposes without the necessity of wading through pages of listings, useless to us.

Let me summarise. Please give us a business magazine for business people who bought a business machine for business purposes.

**Ken Robinson,
Harrogate,
N. Yorkshire.**

Transfer is possible

IN your *Queries/Letters* page you had an enquiry from someone who wanted to transfer all his BBC view files to the QL. I can assure you that the reply given is a little outdated, though of course there is no real reason why your adviser should particularly have known that. It is possible,

at least through use of the disc interface by CST, to copy a whole BBC disc—or even an IBM PC disc—on to a QL disc by using a certain facility within the ROM supplied by CST with its interface.

I have developed a more powerful program for CST to be marketed by it with its interface in the very near future, which allows access to other discs via its directory. With this utility it is possible to see the directory of another disc—e.g., BBC, IBM, RML—and ask for a specific file to be printed, copied to a QL disc, viewed, and so on.

The questioner could therefore do whatever he wants with his BBC discs directly on the QL. It would be worth mentioning this, particularly as CST markets a good disc interface which does not overheat the QL, an excellent utility, and a four-way expansion card system.

I do not work for CST, have its shares, or whatever. I do not, however, as an independent consultant, object to singing the praises of a good third-party supplier.

As an aside, it might be good for your readership if you published some more 'real' programs in the magazine.

**Colin Opie,
Torquay.**

Different price

WE WERE very pleased to see such an excellent review of our recent publication, *QL Archive*, in your inaugural issue. Unfortunately, we have been inundated with telephone calls from readers attempting to order the book at the price quoted of £6.95.

The book is 356 pages and I am afraid that the price is £14.95 and not as stated in your review. For the record, you might be interested in the prices of the other three titles in the series—QL Quill, £7.95; QL Easel, £7.95; QL Abacus, £8.95.

**Richard Brockbank,
Century Communications Ltd,
London W1.**

Monitor problems

I HAVE owned a QL for a year but have had increasing problems with the family who want to watch the television programmes whenever I am using it. It seems pointless to buy another TV but the monitors on the market are so varied in price and quality I do not know which to buy.

Having used a television with the QL, I am used to a poor picture, so high resolution is not essential, but I would miss a colour display.

Can you recommend a good monitor which is not too expensive, and compatible with my computer? The two I have looked at are the Sinclair Vision QL and the Microvitec 1451DQ3 but I know there are also TV/monitors on the market as well.

Finally, it would be satisfactory if I could use the monitor with my redundant BBC micro but I assume that may be difficult.

**Tired and tubed-out,
Wigan.**

• Like many other elements of the computer hardware business, you get what you pay for in a computer monitor. If you want a monitor which can also be used for television, you will be opting for a compromise solution. The resolution of a typical TV screen or even dedicated TV/monitor units is limited by the fact that television signals produce only a certain degree of sharpness and clarity. Something produced primarily for reproducing TV signals will not give you the best picture possible from the QL RGB monitor output.

Since you have already bought a QL—and a BBC micro, it would appear—you would be better advised to spend a little more money now on something like the Microvitec unit than to settle for a TV/monitor unit with which you may ultimately be dissatisfied. So long as you have the correct leads, such a monitor would work with both the QL and BBC micro.

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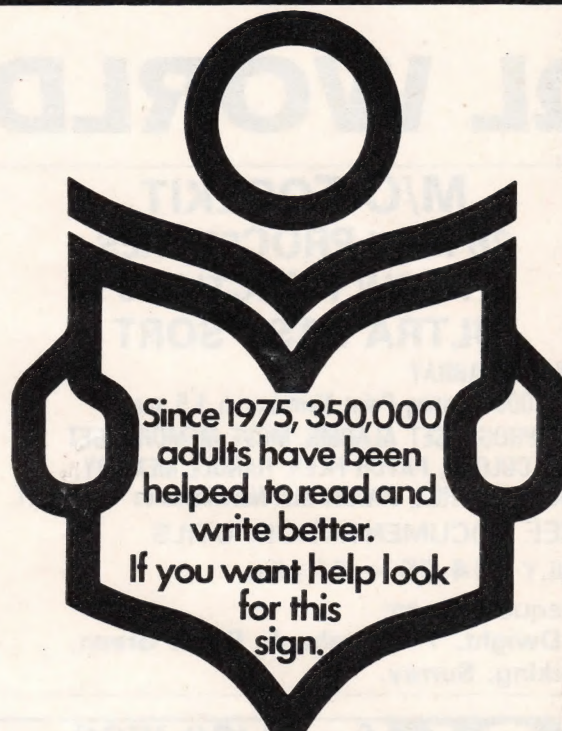
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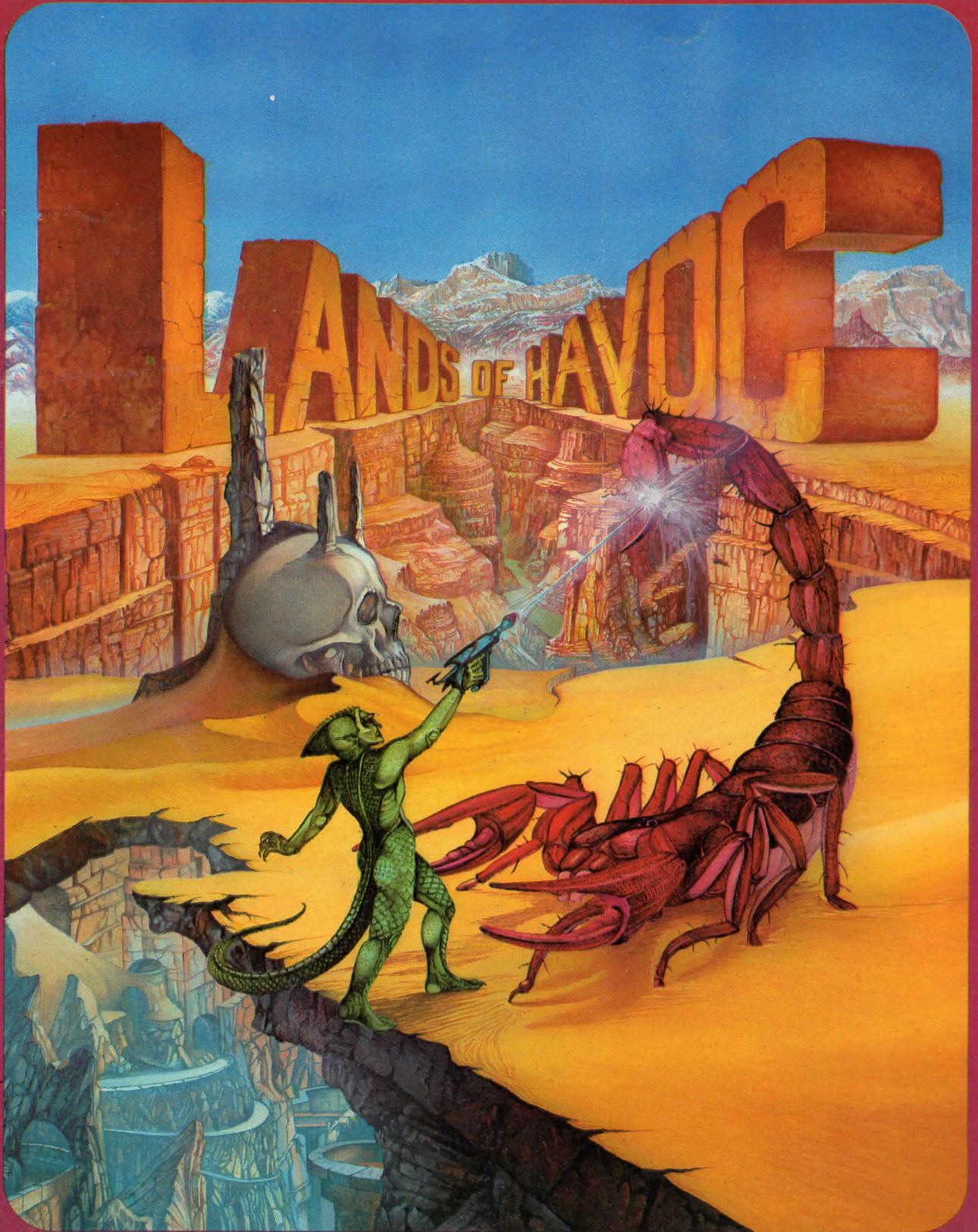
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